

CLAIMS

1. A broadcast program content retrieving and distributing system, comprising:

a program content managing/providing system for storing and managing program contents to be broadcasted and for providing a program broadcast service and a program content distribution service;

a program content analyzing/retrieving system for analyzing a broadcasted program content to extract and store program information serving as a keyword for retrieval and for providing a program information retrieval service; and

a user terminal, wherein:

the program content managing/providing system, the program content analyzing/retrieving system, and the user terminal are connected to each other through a network;

the program content managing/providing system stores, in a case of broadcasting a non-stored program content, the non-stored program content, and distributes, in response to a distribution request of a desired program content sent from the user terminal, a stored program content corresponding to program information included in the distribution request, to the user terminal; and

the program content analyzing/retrieving system receives and analyzes a broadcasted program content, extracts the program

information to be stored on a program content basis, and provides stored program information on a program content which meets a search condition for the user terminal in response to a search request of program information on a desired program content sent from the user terminal.

2. The broadcast program content retrieving and distributing system according to claim 1,

wherein the program content managing/providing system comprises:

a program content database for storing program contents;
a broadcast system for broadcasting a program content stored in the program content database and for storing, in a case of broadcasting a program content which does not exist in the program content database, the non-existing program content in the program content database;

a transcoder for performing signal conversion of a program content which is read from the program content database based on the distribution request; and

a distribution server for reading, from the program content database, a program content corresponding to program information included in the distribution request, in response to the distribution request, and for distributing the program content to the user terminal.

3. The broadcast program content retrieving and distributing system according to claim 1,

wherein the program content analyzing/retrieving system comprises:

a program information database for storing program information on a program content basis;

a reception part for receiving a broadcasted program content;

a demultiplexing part for demultiplexing the received program content;

an analyzing means for analyzing the demultiplexed program content;

a program information extracting/generating part for extracting/generating program information on the program content based on an analysis result of the analyzing means, and for storing the program information in the program information database on a program content basis; and

a retrieval server for reading, from the program information database, program information on a program content which meets a search condition, in response to a search request of program information on a desired program content from the user terminal, and for providing the program information for the user terminal.

4. The broadcast program content retrieving and distributing system according to claim 3,

wherein the analyzing means comprises:

a video analyzing part for analyzing a video coded bit string obtained through demultiplexing of the demultiplexing part;

an audio analyzing part for analyzing an audio coded bit string obtained through demultiplexing of the demultiplexing part;

a caption analyzing part for analyzing caption data obtained through demultiplexing of the demultiplexing part; and

a data analyzing part for analyzing other data obtained through demultiplexing of the demultiplexing part.

5. The broadcast program content retrieving and distributing system according to claim 1,

wherein the program content managing/providing system comprises:

a broadcast system for broadcasting a stored program content, and for storing, in a case of broadcasting a non-stored program content, the non-stored program content; and

a program content distribution system for providing, in response to a distribution request of a desired program content from the user terminal, a stored program content corresponding to program information included in the distribution request, for the

user terminal.

6. The broadcast program content retrieving and distributing system according to claim 5,

wherein the program content distribution system comprises:

a program content database for storing program contents;

a transcoder for performing signal conversion of a program content which is read from the program content database based on the distribution request; and

a distribution server for reading, from the program content database, a program content corresponding to program information included in the distribution request, in response to the distribution request, and for distributing the program content to the user terminal.

7. The broadcast program content retrieving and distributing system according to claim 1,

wherein the program content analyzing/retrieving system comprises:

a program content analyzing system for receiving and analyzing a broadcasted program content, and for extracting/generating the program information to be transmitted; and

a program information retrieval system for storing the

obtained program information on a program content basis, and for providing stored program information on a program content which meets a search condition for the user terminal in response to a search request of program information on a desired program content from the user terminal.

8. The broadcast program content retrieving and distributing system according to claim 7,

wherein the program content analyzing system comprises:

- a reception part for receiving a broadcasted program content;
- a demultiplexing part for demultiplexing the received program content;
- an analyzing means for analyzing the demultiplexed program content;
- a program information extracting/generating part for extracting/generating program information on the program content based on an analysis result of the analyzing means; and
- an analyzed-data transmission part for transmitting the extracted/generated program information to the network.

9. The broadcast program content retrieving and distributing system according to claim 8,

wherein the analyzing means comprises:

a video analyzing part for analyzing a video coded bit string obtained through demultiplexing of the demultiplexing part;

an audio analyzing part for analyzing an audio coded bit string obtained through demultiplexing of the demultiplexing part;

a caption analyzing part for analyzing caption data obtained through demultiplexing of the demultiplexing part; and

a data analyzing part for analyzing other data obtained through demultiplexing of the demultiplexing part.

10. The broadcast program content retrieving and distributing system according to claim 7,

wherein the program information retrieval system comprises:

a program information database for storing program information on a program content basis;

an analyzed-data acquisition part for acquiring program information from the network and for storing the program information in the program information database; and

a retrieval server for reading, from the program information database, program information on a program content which meets a search condition, in response to a search request of program information on a desired program content from the user terminal, and for providing the program information for the user terminal.

11. The broadcast program content retrieving and distributing system according to claim 1, wherein:

when a program content is constituted by a plurality of program segments, the program content managing/providing system stores and manages the program content by assigning identification information to each of the program segments, and distributes, in response to a program-segment-based distribution request of a desired program content sent from the user terminal, a program segment of a stored program content corresponding to program-segment-based identification information included in the distribution request, to the user terminal; and

the program content analyzing/retrieving system receives and analyzes a broadcasted program content, extracts the program-segment-based identification information to be stored on a program content basis, and provides for the user terminal, stored program-segment-based identification information on a program content which meets a search condition, in response to a search request of program-segment-based program information on a desired program content, sent from the user terminal.

12. The broadcast program content retrieving and distributing system according to claim 1, wherein:

when a program content is constituted by a plurality of program components, the program content managing/providing system stores

and manages the program content by assigning identification information to each of the program components, and distributes, in response to a program-component-based distribution request of a desired program content sent from the user terminal, a program component of a stored program content corresponding to program-component-based identification information included in the distribution request, to the user terminal; and

the program content analyzing/retrieving system receives and analyzes a broadcasted program content, extracts the program-component-based identification information to be stored on a program content basis, and provides for the user terminal, stored program-component-based identification information on a program content which meets a search condition, in response to a search request of program-component-based program information on a desired program content, sent from the user terminal.

13. The broadcast program content retrieving and distributing system according to claim 1, wherein:

a plurality of the program content managing/providing systems and a plurality of the program content analyzing/retrieving systems are connected to each other through the network;

the program content analyzing/retrieving system provides for the user terminal, in response to a search request of program information on a desired program content sent from the user terminal,

a service provider identification together with stored program information on a program content which meets a search condition; and

the user terminal includes the service provider identification in a distribution request of the desired program content to be sent to the program content managing/providing system.